

# New Ideas for Car Mechanics

## Brake Indicator Light Burns Only When Engine Runs—Easy Way to Wash Neglected Body Top

POPULAR SCIENCE MONTHLY awards each month a prize of \$10, in addition to regular space rates, for the best idea sent in for motorists. This month's prize goes to Archie Amos, Fort Wayne, Ind. (Figure 3). Contributions are requested from all auto mechanics.

HERE is an emergency brake indicator light with a novel feature. The ordinary method of hooking up such a light has one serious defect. If you forget to turn off the light when you leave the car, the light may run down your battery. By taking the current supply from the generator instead of from the battery wiring, the light will burn only while the motor is running and the emergency brake is set. The wiring is shown in Fig. 3. A jeweled radio indicator light or any other small light fastened to the dashboard of the car will serve the purpose.

Locate the wire that comes from the generator and connects to the automatic cut-out. Make connection to this wire as shown. Since the voltage on the generator side of the line may rise above six volts, use a twelve-volt bulb or a fixed resistance in series with the six-volt one.

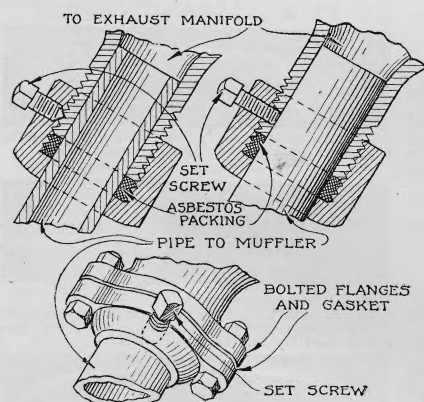


Fig. 1. Set screw in exhaust pipe manifold holds it tight and stops escape of gas.

### EXHAUST UNION CLAMP

ON MANY engines the union that holds the exhaust pipe to the exhaust manifold has a tendency to come loose. And when it does, the leaking gas makes an objectionable noise. Figure 1 shows a way to overcome the trouble. First screw the union as tight as you can get it. Then drill a hole through the shell and tap it for a set screw. Better still, run the set screw through the wall of the exhaust pipe.

Fig. 2 shows hose attached to long handled scrubbing brush and used for convenient cleaning of car top.

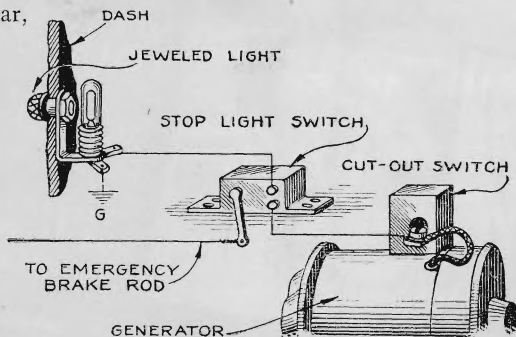


Fig. 3. Emergency brake indicator light, hooked to the generator, is on only when engine runs.

### CLOTH HOLDS SCREW

MANY useful ideas for holding screws so as to start them in hard-to-get-at places have appeared in POPULAR SCIENCE MONTHLY. Figure 4 shows one of the most ingenious tricks that we have described. First take an old rag, one that tears easily is best, and push the point of the screw through the cloth near the center. Next place the screw driver blade in the slot of the screw head and pull the cloth back over the blade with a twisting motion. The pull of the cloth will hold the screw in place on the end of the blade until you get it started in the thread. After it has taken hold, pull the cloth over the head of the screw.

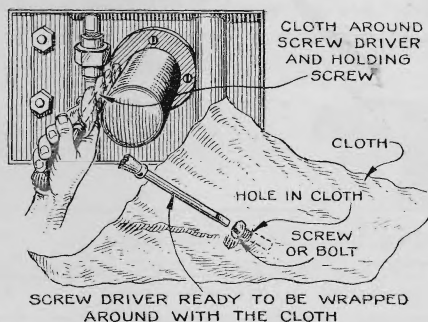
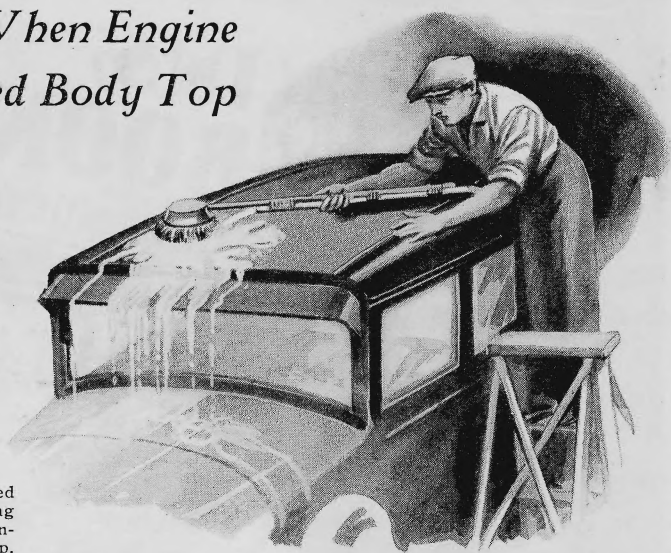


Fig. 4. Screw pushed through a cloth can be held securely and threaded into hard places.



### WASHING AUTO TOPS

AUTO owners who take care of their own cars often neglect to clean the top. A simple solution of this problem is shown in Fig. 2. Take a wall brush and attach to the handle a short length of garden hose, binding it at several points with tire tape. Place a hose union at the handle and have the brush end of the hose a few inches from the head of the brush. No nozzle is necessary. When you want to clean the top fasten the hose and turn on the water. A few sweeps of the brush and the job is easily and quickly done.

### SUITCASE CARRIER

IF YOUR car is fitted with the mudguard bumpers now so popular, you can fit a carrier for a single suitcase or similar package as shown in Fig. 5. Most of these bumpers are of the double bar type and there is plenty of space for a board or

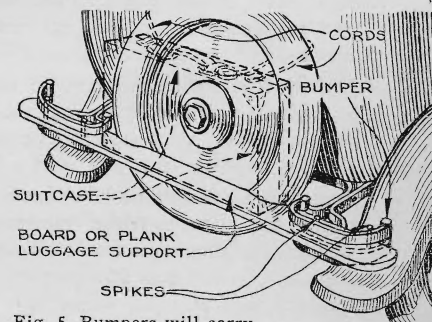


Fig. 5. Bumpers will carry board to which suitcase can be strapped while on a trip.

plank between the two bars as indicated. Temporarily, the board can be held in place with heavy nails driven in forward of the bumper bars. The top of the suitcase can be lashed to the spare tire.

While this luggage carrier does not look as well as a commercial one, it will serve in an emergency.